

EDITORIAL

THE EFFECTS OF STORMY WEATHER ON FORESTS

It took only a few hours, and in some localities a short fifteen minutes, for the wind of stormy and almost hurricane force to destroy the hard work of generations of Croatian foresters on the stretch from the Slovenian border to eastern Slavonia, home to the commercially most valuable forests in our homeland: forests of pedunculate oak. It was these forests that took the severest blow. July 19th of 2023 will be remembered for misfortunes just like those winter days in 2014 and 2017, when ice and wind inflicted enormous damage on the forests in Gorski Kotar. The highest recorded wind speed in the Županja area was 180 km per hour. Historically, the highest recorded wind speed so far, amounting to 260 km per hour, was caused by a tornado in the surroundings of Novska in 1892, when 150 thousand oak and beech trees perished. The witnesses of this year's storm were astounded by the power of nature, while the consequences resemble the cataclysm similar to that of an atomic bomb blast. Centuries-old forests of pedunculate and sessile oak, as well as beech, were turned into kindling and were flattened into cones. Although the storm led to human casualties, they did not occur in forested areas due to a set of fortunate circumstances (the thunderstorm occurred in the afternoon after working hours, so the forests were empty of people). The trees in alleys and parks in settlements posed a greater threat. More and more frequent extreme weather events leave a negative impact on the forest wealth in Croatia, but also in the rest of Europe. However, in spite of the evident effect of weather phenomena on the overall life, there are still sceptics who do not believe in human influence on climate change. For more than half a century there have been resolutions aimed at reducing the negative effect of the development of modern civilisation, primarily on the increase of carbon in the atmosphere and the rise in temperature. Regrettably, those who contribute the most to these negative trends, and these are primarily the richest countries in the world, are still not prepared to renounce comfort and the race for profit to the detriment of the entire planet Earth. The initial estimates of forest damage in state forests of Croatia amounted to over a million cubic metres. Subsequent field inspections increased damage to one and a half million cubic metres. Financial damage has so far been estimated at 100 million

euro. There are no estimates of damage in private forests as yet, but damage is most probably high as well. More accurate data on damage will be established only after all the inflicted areas have been inspected and aerial surveys of the forest areas have been completed. The first thing to do was to clear public roads, which could not have been done without the help of forestry operations. This is where the state company Croatian Forests Ltd again stepped in with their readiness and capacity to help the community restore the safest possible transport in forest areas. There is arduous work ahead on clearing forest roads, and even more importantly, several years of work on repairing damage and restoring forest stands. Older stands, especially those in which shelterwood cuts were started or which were on the brink or regeneration, suffered the severest damage. Regular forest management activities were considerably disrupted by this disastrous event, while forest ecosystems of oak were additionally damaged by several years of dry periods and the negative impact of the oak lace bug, leading to a worrying long-lasting absence of acorn yield. It is questionable how regeneration will be undertaken in the light of a series of negative factors that primarily affect lowland ecosystems. The great damage inflicted on the wood mass will significantly reduce the financial value of sold products, which will mostly end up as stack wood and fuelwood. Decreased yields and increased costs require financial support of the state, similar to the support provided by the Federal Republic of Germany. Croatia's membership in the European Union should also provide a positive aspect after this unprecedented weather disaster in repairing the damage to the constitutionally protected forest resource, whose positive role in mitigating climate change is gaining increasing importance. It is necessary to receive overall help from the relevant ministry both in financing the restoration and in simplifying legal regulations pertaining to such circumstances. A more positive media support and broader monitoring of unparalleled damage to forests is also needed. After this disaster, the public view of urban forestry and the negative attitudes towards removing dangerous and potentially dangerous trees from tree alleys and parks will probably change for the better.

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